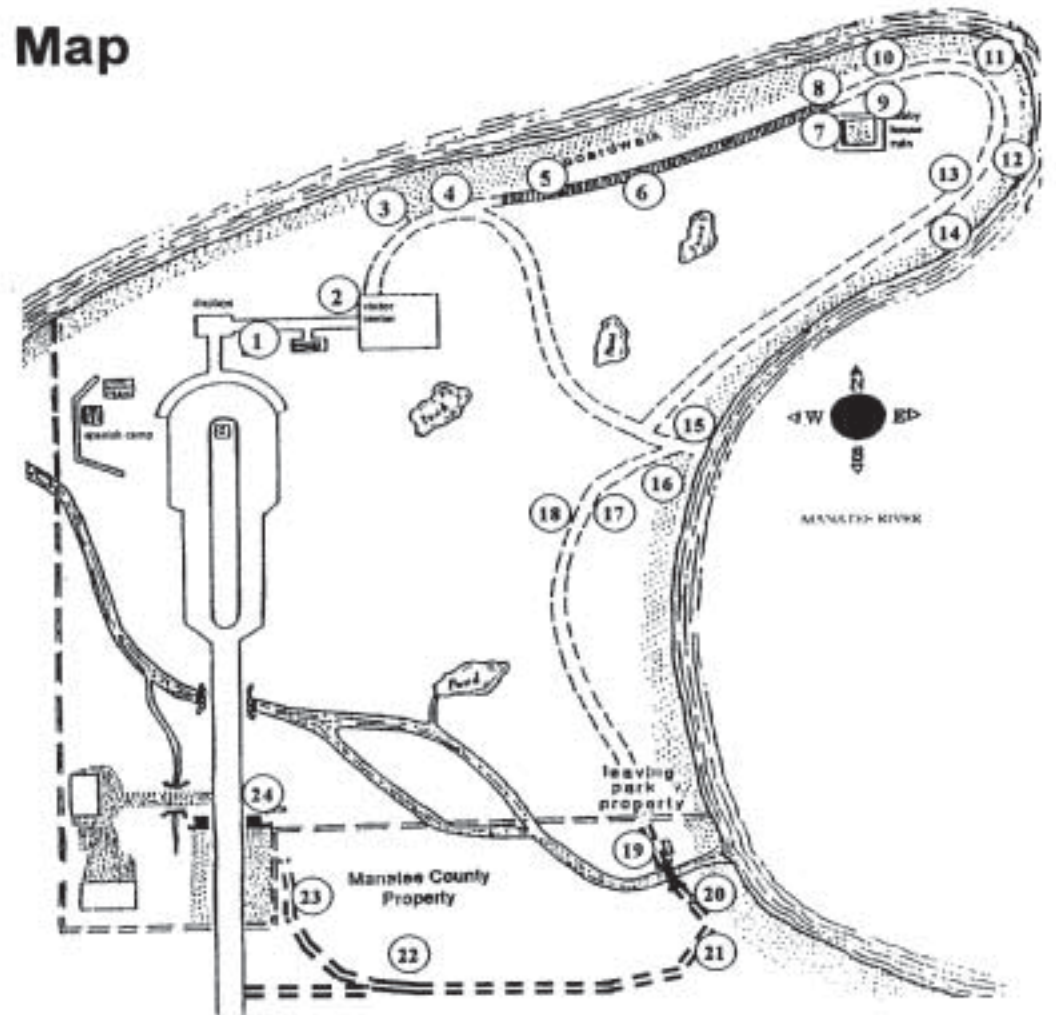




First Encounters Nature Trail

Map



Prepared by DeSoto National Memorial Staff



May 1, 2002

1



Gumbo Limbo *Bursera simaruba*

The large trees planted on the lawn outside the Visitor Center are **gumbo-limbo** *Bursera simaruba*. These trees, along with the De Soto Trail Monument, were placed here for the 400th anniversary of DeSoto's landing in 1939. However there are many growing naturally in the park, since their natural habitat is coastal hammock and shell mound areas. The reddish brown peeling bark is also photosynthetic, which is an important adaptation in this tropical deciduous tree. Tampa Bay is the northern extent of its natural range. This is one of the largest groves of gumbo-limbo in the United States.

2



Coontie *Zamia pumila*

Planted outside the visitor center is a plant that was very important to Florida's first people. **Coontie** *Zamia pumila*. The root of this plant was a food source, not only to Florida's natives but to the early settlers. In fact Coontie flour was so popular at the turn of the century that the pinelands and hammocks were overharvested and the plant has become rare. In order to process the flour before it was made into bread, the coontie had

to be boiled three times before its poisons were made harmless. How would you like to be the person who tested this theory?

3

As you approach the beach three bodies of water come into your view. The **Manatee River**, a mile across, joins the shores of **Snead Island**. (What is on Snead Island? **Emerson Point Park** and the largest Native American temple mound in Tampa Bay) Expanding north and westward, **Tampa Bay** looms before you. On the western horizon, the sky meets the waters of the **Gulf of Mexico**. On a clear day you can see Anna Maria Island, Egmont Key, Fort De Soto and St Petersburg from this spot.

Field Notes:

Enter the First Encounters Trail and proceed down the trail. You are entering a semi-tropical wilderness. Use all of your five senses to the fullest to absorb as much as possible. Relax, observe, and enjoy. See the lush green mangrove jungle. Now close your eyes. Taste and smell the salt air. Feel the moist breeze off the Manatee River. Hear the insects at work all around you, the rustle of leaves through the trees, you may even hear a songbird in the distance. Wildlife abounds in this area at dawn and after dusk. It subsides in the daylight with the intrusion of woodpeckers, bluegray gnatcatchers, warblers, shore birds (great blue heron, great egret, snowy egret, little blue heron, ibis) and sea birds (osprey, pelican, gulls, terns). A variety of fish, reptiles and amphibians also call this place their home.

Mangrove Forest

Here you are in a **mangrove forest**. What makes a plant a mangrove is that it grows in salt water. Mangroves have special adaptations to allow them to grow in the harsh salt-water environment. Mangroves form one of the most productive coastal ecosystems in the world. Mangrove swamps form in intertidal areas sheltered from strong wave action. Mangrove leaves provide the basis of the food chain in our bays and estuaries. When the leaves die they fall into the water and rot to become *detritus*. This detritus supports mangrove inhabitants such as tiny crabs and fish. These in turn serve as food sources for other animals up the food chain. There are three types of mangrove in this park.

Black Mangrove

These pencil-like protrusions sticking up out of the soil are *pneumatophores* or breathing roots of the **Black mangrove** *Avicennia germinans*. The pneumatophores allow the black mangrove to breathe when it is flooded by high tide. Many people ask what the small trees are that are growing among the pneumatophores? These are red mangrove seedlings *Rhizophora mangle* – their *propagules* have floated in and taken root here.



Black Mangrove pneumatophores

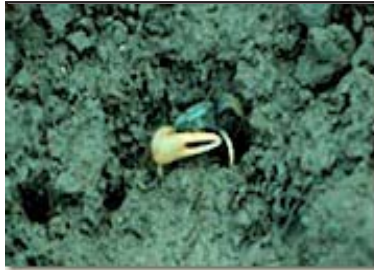


5

White Mangrove

The other type of mangrove we see here is the **white mangrove** *Laguncularia racemosa* with the distinctive furrowed bark. The white mangrove grows landward of the red and black mangrove, but still in the intertidal zone. The white mangrove has two salt glands at the base of the leaf. Using these glands to excrete salt allows the plant to utilize fresh water for life processes.

White Mangrove bark



Fiddler crab

Take a left when you get to the boardwalk. Travel along the boardwalk and notice the surface beneath you. If the tide is high there will be water present. If the tide is very low, you will see small creatures scuttling into their holes among the pneumatophores, these are **fiddler crabs**. Can you see them? The male fiddler has one large claw. This claw is used for posturing only, male fiddlers rarely fight, it would be detrimental to survival.



6

Red Mangrove

The **red mangrove** *Rhizophora mangle* grows furthest out over the water. Notice the prop roots, they are specially adapted to exclude salt. The prop roots are also important to small fish and other animals that hide from predators in their shelter. Mangrove leaves provide the basis of the food chain in our bays & estuaries. When the leaves die they fall into the water and rot to become **detritus**. This detritus supports mangrove inhabitants such as tiny crabs and fish. These in turn serve as food sources for other animals up the food chain. The fruits of the red mangrove germinate while still on the tree. The fruits grow up to 8" long and resemble green pencils. After falling the young plants simply need to find a stopping place in the coastal sand in order to take root. The canopy of branches and leaves is an important nesting place for many species of seabirds.

Red Mangrove
Rhizophora mangle

Take the side trail to your right here before you get to the gate at the road.



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Moist Hammock Ecosystem

As we turn north we are travelling "downhill" once again. Notice the change in plant community, we are in a **Moist Hammock**. The ferns all around indicate moisture. You will see many of the same plants that we noticed on the main trail.

Ferns in this hammock indicate moisture.



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Come out at the entrance sign to DeSoto National Memorial (photo opportunity) and return carefully through the parking area. Notice the mangroves again and the giant **Leather Fern** *Acrostichum danacifolium*.

22



Sand Pine *Pinus clausa*

Coastal Sand Pine Scrub

Coastal Sand Pine Scrub is located in the “stable” coastal zone of ancient dunes well protected from salt spray and storms. Plants here include very large, old sand pine *Pinus clausa* with the typical scrub oak contingency: **Chapman’s oak** *Quercus chapmanii*, **myrtle oak** *Quercus myrtifolia*, and **sand live oak** *Quercus geminata* and some **saw palmetto** *Serenoa repens*. Some wonderful wildflowers here are the **golden aster** *Chrysopsis sp.*, and **garberia** *Garberia heterophylla*.



Scrub oaks can be very old and appear small. They are stunted by the poor soils and harsh conditions of their environment. Note clipboard in photo for scale.



Gopher tortoise
Gopherus polyphemus

Gopher Tortoise

This is gopher tortoise habitat, there is one living here, but he keeps a private burrow. The **Gopher Tortoise** is a species of special concern in Florida because it’s habitat is being lost. It needs high, dry land and the special plants that grow here like gopher apple and wiregrass. The gopher tortoise is considered a keystone species because shares its burrow with many other creatures, over 300 species of animals have been documented living in gopher burrows (not all at the same time in the same burrow!) including the endangered gopher frog, endangered indigo snake, rabbits, mice, and insects.



Spanish moss *Tillandsia usneoides*



Tillandsia fasciculata

Epiphytes

An *epiphyte* is a plant that grows on the surface of another plant, doing it no harm. Near the end of the boardwalk you may notice some gray-green material hanging from the trees, this is **Spanish moss** *Tillandsia usneoides*. This is not a true moss but a bromeliad, or air plant, closely related to the pineapple. Native American women made skirts woven from Spanish moss for special ceremonies. Henry Ford used it to stuff seats in the first cars ever made. When you see a plant that seems to be overcome by Spanish moss, there is another problem that the epiphyte is taking advantage of, it does not cause the plant to die.

There are two other *Tillandsias* in the park. Here you will see **ball moss** *Tillandsia recurvata* which appears in ball-like clusters on braches. Elsewhere on your walk you may notice the striking *Tillandsia fasciculata* which has been commercially exploited in Florida because of it’s ornamental value.



Ball moss *Tillandsia recurvata*

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Christmasberry *Lycium carolinianum*
also known as Matrimony Vine

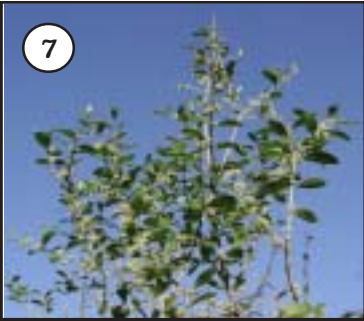
Christmasberry or Matrimony Vine

In the understory here you will see the rare Florida **Christmasberry** *Lycium carolinianum*. In the fall this shrub with tiny succulent leaves is covered with small lavender four-petaled flowers, and then in December the red berries give the plant its common name Christmasberry.




Red berries in December give the name “Christmasberry”

7




Florida Privet
As you step off the boardwalk you will notice several small shrubby trees with small leaves and possibly tiny black olives in the fall or winter. This is the **Florida Privet** *Forestiera segregata* it is a member of the olive family and is a food source for many songbirds.

Look for Florida privet blossoms in January and February




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Fish Poison Vine
On the left we see the **fish poison vine** *Dahlbergia ecastophyllum* used by the Native Americans to catch fish. There is a compound in the roots and bark that paralyzes the fish, but is harmless to the human system. Indians would crush the plant parts, put them in the water and wait for the fish to float to the surface. They would gather them in baskets and have fresh fish to clean when they got back to their village. This procedure is illegal in our modern culture.

Take the side trail to your right and view the tabby house ruins.


21




A small rise in elevation leads to the coastal hammock ecosystem.



Wild coffee
Psychotria nervosa



Hickory nuts *Carya sp.*



Grape vine *Vitis sp.*

The grape is not cultivated by the natives of this great kingdom of Florida, and they do not care as much for it as do people of other nations,... Our men were extremely happy over these fine specimens of the fruit, for they were similar to those grown in Spain, the like of which they had not found in Mexico or in the whole of Peru.
~ Garcilasco de la Vega, 1605



Catholic Church property history

The Catholic Church owned these 2 acres with the statue and cross until 2001. In January 2002 the County purchased the remainder of the property up to the boundary of the National Park, with the exception of an easement for the cross and statuary which were reserved by the Catholic Church. The Church will continue ownership of the monument and cross only. The Catholic Church erected the statue to honor the Catholic missionary priests that came with the Conquistadors. Originally this monument contained a bronze statue of Hernando de Soto, but vandalism forced a move to the South Florida Museum in downtown Bradenton. The cross has been here since 1995 as a landmark to boaters coming into harbor from the Manatee River and Tampa Bay.



A typical Tabby house in Manatee circa 1850

Tabby House Ruins

Tabby is a building material made of sand, water and lime (made by burning crushed oyster shells) used by early settlers of the area. Other local examples include the Gamble Mansion, Braden Castle and the chimney of the Griffith house atop the temple mound at Emerson Point.

This house was built in 1843 by **Mr. William H. Shaw** from Point Comfort, Virginia. It was built on the site of a former fishing rancho. Fishing ranchos were popular all along the Gulf Coast in the early 1800’s. Captain William Bunce operated the one at this site for a few years until the 2nd

Seminole War broke out in 1835. At that time, Bunce employed Spanish fishermen and many Indians. The U.S. Government wanted Capt. Bunce to send his Indians to a reservation in Oklahoma, but he resisted. After receiving a report that the Indians were planning to attack the fisheries, Bunce moved his entire rancho to Passage key. This key is located one mile off the northern tip of Anna Maria Island, just west of here.

The Shaw family moved here in 1843 and lived in the 16 square foot tabby house on this site until the 3rd Seminole War (the Billy Bowlegs War) broke out in 1855 and threatened all the settlers living in Sarasota and Manatee. Mr. Shaw moved his family to Key West for safe haven.



Cabbage Palm *Sabal palmetto*

Cabbage Palm

The **cabbage palm** *Sabal palmetto* is the official State Tree of Florida. It is widespread throughout Florida. The trunk can be smooth or sometimes covered with old leaf stalk bases called “boots”. This tree was very important to our native peoples. The fibers among the leaves were collected and twined to make rope and fishing nets. The early settlers of this area harvested the heart of palm, or **swamp cabbage**. This was done when the fronds were still at ground level. The heart is the meristem, or growth point of the tree, and when harvested it kills the tree.

Notice the small rise that brings you into Riverview Pointe Park.
In Florida a small rise in elevation, even a few inches, can mean an entirely different plant community.
...the country is very level, having many ponds, dense thickets, and, in places, tall pine-trees: the soil is light, and there is not in it a mountain nor a hill.
~ Gentleman of Elvas, 1557



9

Strangler Fig

This particular cabbage palm has been invaded by a **strangler fig** *Ficus aurea*. A fig (fruit of the tree), or seed in bird droppings, falls into the palm “boot” (where the frond attaches to the tree) and begins to grow. The roots grow down and the branches grow up, so that the strangler fig begins life in the air. The ficus doesn’t actually “strangle” a tree (it just looks that way) but it competes with its host for sunlight. The faster growing strangler fig can shade out the photosynthetic process and kill the palm that way.

Strangler fig *Ficus aurea*



10

Sea Grape

Walk out to the riverfront trail and see the **sea grape** *Coccoloba uvifera* trees, several were damaged by Tropical Storm Gabrielle in October 2001. Sea grape is not a true grape, it is given this common name because it grows by the sea and has tasty fruit the size and color of grapes. The pit of the sea grape is much larger than that of a true grape. It is said that DeSoto’s men may have used the large leathery leaves for playing cards. They could draw on them and use them over and over again. Sea Grape makes a delicious jelly. Back in the days before strict postal regulations, tourists could write on the sea grape leaf, address it, stamp it and send it through the US Mail as a post card.

Sea Grape *Coccoloba uvifera*



Close up of leathery leaves

In the trees here you will also see many epiphytes of the *Tillandsia* species. **Ball moss** *Tillandsia recurvata*, and **Spanish moss** *Tillandsia usneoides*.

Riverview Pointe property history

In 1996 the Catholic Church sold 9.1 acres of the Riverview Pointe property to a developer who was prepared to subdivide the property for residential homes. The people of Manatee County said in 1997 that they wanted this to be part of DeSoto



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National Memorial. The federal government could not purchase the land at the time, so the County Commissioners agreed that if the citizens of Manatee County could raise at least \$50,000 they would buy the land and create a County park next to DeSoto National Memorial. The residents of the surrounding neighborhoods held festivals, raised awareness and collected over \$100,000 towards their commitment to the County Commissioners! The County proceeded to purchase the land and later was successful in acquiring a State Preservation 2000 grant to offset the

purchase cost. This property, Riverview Pointe Park, truly belongs to the people of Manatee County. It is maintained according to an agreement between Manatee County and the National Park Service, governments working together for the people.




19

Surface Water Drainage

Observe the water under the bridge. This is surface water coming from the surrounding area and merging with the tides creating an important coastal stream habitat. Why is this water brown? Tannic acid in the leaves and roots color the water brown, this is the same process that makes tea brown. The water is not dirty.

Tannic acid from tree roots and leaves makes Florida surface water brown, it is not dirty.

18




Buttonwood *Conocarpus erectus*


Buttonwood

Buttonwood *Conocarpus erectus*. The buttonwood always grows in community with the mangroves, but is not considered a mangrove because it does not grow in salt water.

The hard, heavy, strong wood is water-resistant and was used in naval construction. Buttonwood was prized by Florida fishermen as the best wood for smoking fish. Today it is protected by law and cannot be harvested.




The furrowed bark of the buttonwood is an epiphyte favorite




Necklace pod *Sophora tomentosa* - and seed pod ->

Necklace Pod

You may see some **necklace pod** *Sophora tomentosa* growing in this area. This woody shrub has compound leaves and bright yellow flowers in spring and summer. The seed pods resemble a beaded necklace. This plant is listed as very rare in the Florida Natural Areas Index (FNAI).



18

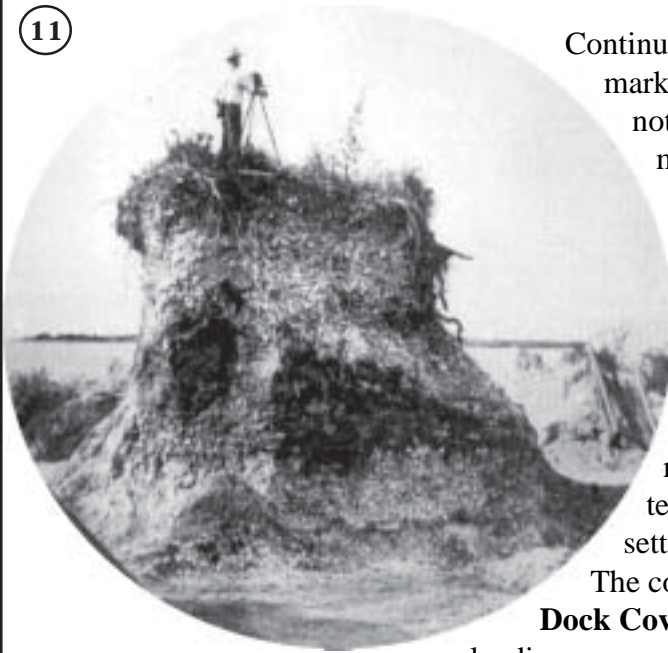


Sea purslane
Sesuvium portulacastrum

Sea Purslane

Sea purslane *Sesuvium portulacastrum* is a common, fleshy herb with small magenta flowers. Its stems turn red with age. The leaves of this plant are harvested when growth is new and can be served in salads. They have a salty “pickle” taste, hence the other common name for this plant **sea pickle**.

11




Last of the midden being mined for road fill

Historical Perspective

Continue along the trail to **DeSoto Point** marker. Just before you get to the turn, notice the shells along the beach, these may be the remains of Indian middens from over 1000 years ago. A **midden** is a shell mound or refuse heap, also known as a **kitchen midden**. This riverfront was the site of a midden 567' long and 20' high. It was mined for road fill in the 1920's to make 75th Street a “hard road”. The DeSoto Point sign briefly tells the historic tale of Indians, settlers and civil war ships.

The cove here was once called **Cattle Dock Cove**. This natural harbor was ideal for loading cargo, and the main cargo from the mouth of the Manatee River in the late 1800's was cattle. Records show the dock was in use from 1859-1909.

12



Damaged bark of gumbo-limbo

National Park Service Organic Act

Follow the trail along the cove and into the canopied trail again. A little way down and on your left you will see a small grove of gumbo-limbo trees. See how people carve the soft bark. The bark is a living part of a living tree. The National Park Service would like to remind you to keep a strong code of ethics and leave the park better than you find it. The National Park Service Organic Act guides park management and states:

“...conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”



13

Spanish bayonet

Further down the trail on your right you may notice some **Spanish bayonet** *Yucca aloifolia* in the shady understory. This plant is named for the deadly sharp points at the end of its leaves. Fibers from this plant were important to the Indians and early settlers, it made a very strong rope, and soap could be made from its roots.

Spanish bayonet *Yucca aloifolia*



14

Sea Oxeye Daisy

Just ahead to your left is a stand of Sea Oxeye Daisy *Borrichia frutescens*. This plant is common to coastal sands and marshes from Virginia to Texas, including our Florida peninsula.

Sea Oxeye Daisy
Borrichia frutescens

Short cut option:

At this point in the trail you can turn right for a 5-min return to the visitors center. Or you can continue on to your left to Riverview Pointe County Park which is home to several different plant communities in a very small area. The return time for Riverview Pointe loop is about 20 minutes - you will end up at the main entrance to DeSoto National Memorial.



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Seabirds

Keep an eye out here for large seabirds like the osprey, pelican, vulture and even a rare bald eagle. Perhaps wading birds such as the great blue heron will be seen in the cove.

Follow the trail along the coastal strand in a southerly direction.

Great blue heron



16

Nickerbean

Nickerbean *Caesalpinia bonduc* is an extremely thorny shrub of the coastal strand ecosystem. Each spiny seedpod contains 2 round, smooth, poisonous gray seeds. It is said that the boys who wore “nickers” used these “beans” to play marbles. Be careful you don’t get “nicked” by the nickerbean!



Note 2 gray seeds
in pod.

Nickerbean *Caesalpinia bonduc*



16

Prickly Pear Cactus

You will find **Prickly Pear Cactus** *Opuntia stricta* here as well. The fruit of the cactus was prized by the Indians as well as the Spaniards for its sweet, tasty flesh. The ripened fruit can be eaten right off the bush after removing the hairlike spines, or made into jams or marmalade. The pads of the cactus are also edible when the spines are removed, another name for this is “nopales”.

Prickly Pear Cactus *Opuntia stricta*



17

Jamaica Caper

Jamaica Caper *Capparis cynophallophora* is a striking shrub or small tree. Lovely white flowers turn pink with age, open just after dark, and are pollinated by night-flying moths. Flowers open just at dark when moths begin to fly and have a fragrance which can be smelled from a long distance. The Mediterranean caper (another species) flower buds are harvested, pickled and sold as capers.

Jamaica caper